PPA and the Risk of Hemorrhagic Stroke

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PPA and the Risk of Hemorrhagic Stroke

Selection Bias

- Basic problems with case and control selection in the conduct of the study render this a failed study.

- Cases
  - 702 cases out of 1717 potential cases (41%)

- Controls
  - 151 telephone numbers called to identify a control (p. 17, final report)
  - Approximately 3 eligibles for each control

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Cases and controls differ greatly on demographic characteristics, suggesting very substantial selection bias

Education	Cases (%)	Controls (%)
College	40	62
< High School	20	9

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Use History
Any PPA Exposure
Cases -- 3.8 %
Controls -- 2.4%

- Assume that prevalence was 4% in the 4200 controls not included. True prevalence in controls would be 3.6%

$$1400 \times 2.4 \quad = \quad 33$$
$$4200 \times .04 \quad = \quad 168$$

- Same as cases: Due to select bias of controls -- unknown true prevalence of PPA in controls

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Time Period of Use of Drug
(Men and Women)

	Cases		Controls	
Within 2 wks of current use	N	%	N	%
First use	8	1.1	5	0.4
Not first use	13	1.9	16	1.2
Prior use	06	0.9	12	0.9
Use 2 wks to 3 days of event	11	1.7	33	2.5
Total use	38	5.4	66	4.8

Why greater use in controls -2 weeks-3days prior to event?

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Sex Differences in Outcome

Any PPA <3 days	Cases (n=383)		Controls (n=750)		O.R.
	N	%	N	%	
Women	21	5.5	20	2.7	2.0
	Cases (n=319)		Controls (n=626)		
	N	%	N	%	
Men	6	1.9	13	2.1	-

Difference in women cases only

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Cough/Cold Only

Any PPA <3 days	Cases		Controls		O.R.
	N	%	N	%	
Women	16	4.2	19	2.5	1.54
Men	6	1.9	13	2.1	0.62

Risk for women, protective for men?

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Small Numbers

- Appetite Suppressant for Women

  6 Cases
  1 Control
  Odds Ratio = 12

- Prior Use in Men

  1 Case
  8 Control
  Odds Ratio = 0.25

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Characteristics of Cases

- Consumption of Caffeine:
  Current Users (first use in 3 days)
  - Cases (9)
    - 10 cups coffee / day
    - 8.5 cups coffee / day
    - 10 glasses soda / day
    - 8 glasses soda / day
    - 6 glasses soda / wk (History of stroke)
    - 1 glass soda / wk (History of stroke)
    - 2 - (0) (Both prior headaches)
  - Controls (5)
    - 6 cups / day coffee
    - 6 glasses / day soda
    - 2 cups coffee / day (2)
    - 1 negative / day (cup of tea)

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